

CLAIMS

1. A sheet material identifying apparatus for identifying the kind of a sheet material, comprising:

an adjusting assembly for dehumidifying or
5 humidifying a predetermined region of the sheet material and adjusting the moisture content of the predetermined region;

an external force applying means for applying an external force to the predetermined region of the
10 sheet material whose moisture content is adjusted; and

a detecting means for detecting the external force propagated through the sheet while the external force is applied by the external force applying
15 means; wherein

an external force is applied to the predetermined region whose moisture content is adjusted through the adjusting assembly by the external force applying means and the kind of a sheet
20 material is identified in accordance with the external force propagated through the sheet detected by the detecting means.

2. The sheet material identifying apparatus according to claim 1, wherein
25 the adjusting assembly is a heating mechanism.

3. The sheet material identifying apparatus according to claim 2, wherein

the heating mechanism is a fixing device in an electronic photographing apparatus.

4. The sheet material identifying apparatus according to claim 2, wherein

5 the heating mechanism is a transfer assembly in a heat transfer printer.

5. The sheet material identifying apparatus according to claim 1, wherein

the adjusting assembly is a humidifying
10 mechanism.

6. The sheet material identifying apparatus according to claim 5, wherein

the humidifying mechanism is an ink discharging mechanism (print head) in an ink jet printer.

15 7. The sheet material identifying apparatus according to claim 1, which further comprises

an identifying means for identifying the kind of a sheet material in accordance with the external force detected by the detecting means, wherein

20 the identifying means identifies the kind of the sheet material by comparing the external force with a table previously storing the external forces and the kinds of sheet materials corresponding to the external forces.

25 8. The sheet material identifying apparatus according to claim 1, which further comprises

a moisture content detecting means for

detecting the moisture content of the sheet material,
wherein the moisture content detecting means controls
the adjusting assembly so as to adjust the moisture
content of the predetermined region of the sheet
5 material in accordance with a moisture content
detection result by the moisture content detecting
means.

9. The sheet material identifying apparatus
according to claim 1, wherein
10 the external force to be applied to the
predetermined region by the external force applying
means is an impact force or vibration.

10. A sheet treating apparatus comprising the
sheet material identifying apparatus of claim 1,
15 wherein

a sheet is treated in accordance with the kind
of the sheet material identified by the sheet
material identifying apparatus.

11. A sheet material identifying method for
20 identifying the kind of a sheet material, comprising:
a moisture content adjusting step of
dehumidifying or humidifying a predetermined region
of the sheet material to adjust the moisture content
of the predetermined region;
25 an external force applying step of applying an
external force to the predetermined region of the
sheet material whose moisture content is adjusted by

an external force applying means;

an external force detecting step of detecting the applied external force propagated through the sheet; and

- 5 an identifying step of identifying the kind of a sheet material in accordance with the detected external force after the moisture content of the predetermined region is adjusted so as to be kept in a predetermined range.